

PATENT CLAIMS

1. A rotor device, with
 - a laminated core arrangement (8), which has a plurality of axial bores (3, 3') for the conduction of a coolant, and
 - two rotor pressure rings (1, 101), between which the laminated core arrangement (8) is fixed axially,
characterized in that
 - at least one of the two rotor pressure rings (1, 101) is configured for the targeted routing of coolant through the axial bores (3, 3').
2. The rotor device as claimed in claim 1, the axial bores (3, 3') being combined into a plurality of groups by means of at least one of the rotor pressure rings (1, 101), so that the coolant stream through the bores (3, 3') of a group is essentially identical.
3. The rotor device as claimed in claim 2, in each case two, three or four bores (3, 3') being combined in a group.
4. The rotor device as claimed in one of the preceding claims, the bores (3, 3') or groups of bores (3, 3') being coolable contradirectionally with respect to one another.
5. The rotor device as claimed in one of the preceding claims, radii for improving the coolant flow being formed or cast on at predetermined edges of the at least one rotor pressure ring (1, 101).
6. The rotor device as claimed in one of the preceding claims, the at least one rotor pressure ring (1) being configured as a fan.

7. The rotor device as claimed in claim 6, the at least one rotor pressure ring (1, 101) being produced in one piece.
8. The rotor device as claimed in one of the preceding claims, the at least one rotor pressure ring (1, 101) being manufactured from spherulitic graphite iron.
9. The rotor device as claimed in one of the preceding claims, the two rotor pressure rings (1) possessing a similar construction and being arranged on a common axis about a bore or a group of bores (3, 3') so as to be offset in the circumferential direction.
10. A method for cooling a rotor device with a laminated core arrangement (8), which has a plurality of axial bores (3, 3') for the conduction of a coolant, and with two rotor pressure rings (1, 101), between which the laminated core arrangement (8) is fixed axially, by
 - the conduction of the coolant through the axial bores (3, 3'), characterized in that
 - the coolant is routed in a targeted manner through the axial bores (3, 3') by means of at least one of the two rotor pressure rings (1, 101).
11. The method as claimed in claim 10, the axial bores (3, 3') being combined into a plurality of groups by means of at least one of the two rotor pressure rings (1, 101), so that the coolant flows through the bores (3, 3') of a group in each case essentially identically.
12. The method as claimed in claim 11 in each case two, three or four bores (3, 3') being combined in each group.
13. The method as claimed in one of claims 10 to 12, the bores (3, 3') or groups of bores (3, 3') being cooled contradirectionally with respect to one another.

14. The method as claimed in one or claims 10 to 13, the coolant being conveyed actively through the at least one rotor pressure ring (1).
15. An electric machine having a rotor device as claimed in one of claims 1 to 9.